Complex will not be discussed here). Since the application does not include the possibility of using portions of the Short Beach route with other alternatives that may reduce crossing or avoid the water company lands altogether, this analysis would not be considered a complete alternative route analysis by the IWWA of Branford.

(2) Alternatives Analysis of the proposed corridor is also incomplete. The applicant does not consider alternative routing within the proposed corridor itself. Commissioner Carol Lemmon has documented at least three such alternatives within the proposed corridor that would significantly reduce wetland impacts (attached below). These alternatives are being submitted as examples of the failure of the applicant to make all efforts to reduce the damage this activity may potentially have on the natural resources of the Town of Branford.

There are numerous areas within this report that fail to provide adequate information necessary for proper evaluation. If such an application was to come before the IWWA, it would be deemed incomplete and would not allow the application to proceed.

a) The maps included with this report are at a scale that is too large for any valuable interpretation. None of the maps submitted display a 2 ft. contour interval for topography that is a requirement of all submissions to the Town (Section 7.4(g)).

b) Wetland boundaries on maps of this sort are generally standardized with dashed lines and arrows indicating the direction of the wetland area. The wetland boundaries on these maps do not follow any of the standardized formats and are difficult to read. Since the wetland flag numbers are not displayed on the maps and the wetland line symbol does not indicate the direction of the wetland, these maps are inadequate to interpret the wetland areas, particularly in the field. Such a submission would not be acceptable to the IWWA of Branford.

c) Table 11 of the report includes a column for Acreage Affected During Operation that is based on the 10 ft wide portion of the pipeline that will be maintained as herbaceous cover. However, this does not include the additional 15 ft. of disturbance that will be maintained of trees over 15 ft in height. If the area to be disturbed is a forested wetland and the project will not allow that habitat to fully recover, than there is a permanent change in the wetland community that must be included in this analysis. Further, since the 75 ft construction area will also damage the wetland and change the structure of the plant community in those areas (see below), there should be no distinction between acreage disturbed during construction and acreage left after construction unless the applicant is proposing to return the site to the conditions that existed prior to any pipeline installation (i.e., replanting 50 ft trees removed for construction). Therefore the column, Acreage Affected During Operation on Table 11 is incorrect and misleading.

d) The vegetation monitoring control plan is not sufficient for this application. Section 11.12(b) requires monitoring for a period of no less than five (5) years and an 85% or better survival rate for all planted vegetation. The IWWA of Branford also requires a minimum of five years for monitoring and controlling invasive and introduced plant species in all disturbed sites. The monitoring plan submitted notes a two-year plan that would not be considered sufficient.

e) The vegetation restoration plan is also lacking in detail. The wetland seed mix is only listed as a mix, no information is provided as to what that mix will include (Appendix B of Report). Also, the upland seed mixes noted in Appendix B make no effort to match local flora. No watering plan has been submitted and no contingency plan has been considered should the seed mixes not germinate properly (i.e., whole plants). Further the monitoring plan noted in Appendix 3 (Erosion and Sedimentation) makes no mention of the success criteria for the restoration plan. At present the IWWA of Branford is requiring an 85% survival rate for a period of no less than five years (although on an application such as this we would probably want, at least, a ten year monitoring plan to insure a stable community along the ROW).

3 Besides the specific details of the regulations, the IWWA recognizes the importance of ecological considerations as well. Some of the ecological assessments in this report are at odds with observations we have made as an agency through the years.

a) This application appears to be a little weak in its understanding of general seed bank ecology. The applicant states that they will allow the natural seed bank to restore the plant community to some semblance of pre-construction conditions. This is not in accordance with what we know about seed bank ecology and vegetation replacement in wetland systems (Parker and Leck 1985, Leck et al. 1989, Leck and Simpson 1995). The seed bank is a possibility of all plants that could grow both at the site and in the region (most vectors (i.e., wind, birds) do not consider the habitat when they spread the seeds, indeed many invasive seeds may already be in the seed bank) and does not necessarily determine any one type of plant community structure. The seeds that germinate and grow do so because of environmental conditions such as moisture, light, competition and soil structure. Even with an undisturbed seed bank, invasive species are able to win many a battle for dominance. Once disturbed, wetland sites will rarely return to a pre-disturbed community structure, rather they will take a trajectory towards a new community type (consider the plants that spread by vegetative means that may not even be represented by viable seed within the seed bank). Therefore, the seed bank alone cannot be relied upon to restore these areas to some targeted plant community.

By proposing to stock pile the soils and then spread them across the site to reestablish the pre-construction plant community additional

problems arise. First, once the soils are dug up and piled, the seed bank that was in place, is now mixed with seed banks that represent past site conditions as well as seeds from other portions of the marsh. This pile of seeds can no longer guarantee that the species that constitute the present seed bank will represent the seed bank of the future once the soils are replaced. Further, while these soils are piled, they will begin to generate variable temperature and moisture regimes within (think of a compost pile and its need to be turned over occasionally due to heat build up) and this can have a differential impact on a species ability to germinate (some species cannot tolerate moisture or temperature changes as well as others). Additionally, once these stockpiled soils are returned to the construction site, the growing conditions would have been changed and thus, seed germination as well. The seed bank is an integral component of any plant community, but it alone cannot control the structure of any future community. If the applicant needs proof of this have them review any literature on secondary growth forests or the proliferation of plants such as Phragmites australis and Polygonum cuspitatum today. Active planting will have to be conducted and control plans implemented if there is any chance that the disturbed areas will be structured in any predictable manner.

b) Although a rail line presently runs through the site and does open the canopy for long distances, trees that are growing at the base of the embankment are not regularly removed unless they pose a direct threat to operations and even then they are selective cut. Indeed, many portions of the track are shaded for much of the day by trees that are growing as little as five feet away from the embankment. By adding an additional ROW that will, require active tree removal for up to 25 ft either side of the pipe, a new and more permanent change in the structure of the canopy will be instituted. Once it is opened and maintained, light and moisture regimes will be changed further into the existing forest and alter the habitat well beyond the actual area of disturbance. Although the applicant rightfully identifies reduced fragmentation by utilizing an existing ROW, they fail to adequately identify the additional potential ecological impacts this may have on future habitat conditions.

c) The applicant believes that there is a difference between temporary disturbances and long-term disturbances in wetland systems. This is not supported by what we know of these areas. Many wetlands are influenced by minor changes in elevation and hydrology (need citations). Even the tracks of a vehicle can continue to impact vegetation and soil conditions for many years after it has crossed. The idea that there will be some difference between the 75 ft construction zone and the 50 ft ROW is only one of degree. The 50 ft ROW will be disturbed on a very regular basis, while the area of construction that they are calling temporary is really an area of irregular disturbance. If the pipeline requires repair, then the temporary area of disturbance will once again be

disturbed as equipment is moved into the site. In other words, from an ecological standpoint, the habitat in the construction zone cannot be considered just a temporary disturbance, but rather one that has the potential to be disturbed at irregular intervals into the future. Each subsequent disturbance will have the potential to change the trajectory of the plant community in the area. Therefore we cannot even guarantee that the community profile that reestablished itself after the initial construction phase will ever reestablish itself again in the future. Since the temporary construction acreage is subject to future disturbances, it should not be considered different from the active ROW when determining total wetland area (and this isn't even accounting for the differences that the habitat will face in going from a mature forested zone to an immature forested zone).

Even if it were possible to guarantee that the construction zone was never to be disturbed again, the changes that are instigated by the initial disturbance will always mean that the area in question will be different from the habitat that once existed at that particular location. The habitat does not distinguish between disturbances, it just responds. Although there are some examples of temporary disturbance that can be considered temporary (i.e., cutting a path through the wetland with a machete for the purpose of land surveys), the clear cutting of trees and the compaction of soils by heavy machinery cannot be considered ecologically temporary. If this application were to come before the Branford IWWA, the limit of disturbance would only include the column on Table 11 marked Acreage Affected During Construction, no other numbers would (or should) be considered.

Although there are many other specific problems with the application (i.e., maps are not at the required scale, no discussion of benthos or macroinvertebrates in the tidal zones, feasibility of horizontal drilling from Short Beach was not investigated in the alternatives analysis), there is enough material here to prevent this application from going forward with the IWWA of Branford. Although the application will be decided by Federal and State Agencies, it should still be held to the same standards that we would impose on the citizens of Branford itself. The IWWA of Branford would find this application incomplete and would not approve the plan as submitted.

Respectfully Yours
Your Name Here (I would like to have this submitted as an IWWA Letter from all of us)

ATTACHMENT #1

The following information was submitted by Commissioner Carol Lemmon:

Three of the pipeline crossings are absolutely unacceptable, as they would destroy high quality fragile wetland ecosystems consisting of wetland shrub swamps, vernal pools and forested wetlands with flowing watercourses.

1. The first of these proposed crossings occurs just north of Pleasant Point Road, east of the tracks, in a large red maple-tupelo forested swamp, with numerous tree buttresses are often 2 to 3 feet in height to accommodate seasonal flooding. Sphagnum moss often occurred on the roots at this height, indicating long periods of standing water. Many large depressions contained gray-stained leaves that are indicative of vernal pools. On the west side of the tracks, the grassy strip that borders the woodlands is 30-40 feet from the rail line. This wooded area is not a wetland area was not even considered as a feasible and prudent alternative.

2. The second unacceptable proposed wetland infringement is at the midpoint between Route 146 and Gould Lane, on the west side of the track. This wetland occurs adjacent to the railroad track. On Sunday October 7, 2001, I observed pools of standing water of more than 1 ½ feet deep and flowing watercourses of more than 1 foot deep within 25 feet of the tract. Looking for marbled salamander eggs, I sank into muck up to my knees and needed an overhanging tree branch to help me out and I was within 5 feet of the water. Across the tracks was a ledge, and not wetland.

3. The third proposed wetland crossing that failed to consider alternate routes is where the proposed pipeline crosses Route 1 on the east side of the tracks, goes around the building where Islander East has its offices and crosses the Branford River, a shrub swamp and a cattail marsh at the absolute widest point possible. An alternate route is to cross Route 1 on the west side of the track and go over a dry corn field and cross Branford River, straight on, at a 90 degree angle, and proceed to route 139 and out of the town of Branford without a great deal of environmental impact to the wetlands.

drilling will avoid some of the onshore shellfish beds, but it does break out about a thousand feet from -- away from shore and will come out on what I will term as undesignated town ground. And I must stress to you that, although it's undesignated town ground, it's still valuable shellfish ground. It should be protected. And there's certainly the potential of -- of cultivation of a resource there. And it does fall under Branford jurisdiction, basically. That's outside of the fact that one of the things I'd like to talk about is the directional drilling itself.

There was a problem with Iroquois' directional drilling under the Housatonic River, if I'm correct in this, and I believe I am. There was a problem, in that it came -- the drill itself missed somehow and there was a spill of this bentonite material. I think that's what it's called. It's a compound they use to lubricate the cutting head. And I believe there was a

spill of it. I think it was in the Housatonic River. And there was a consequence with the DEP, as far as that incident.

The point being that it's possible that there could be a mishap with the directional drilling. There is a precedent for it -- there is a precedent for it in the State of Connecticut, so it's possible it could come up in the middle of somebody's shellfish bed. It's possible.

Is it likely?

I don't know, but, again, it is a concern. And the compound they use is something that is not to be left on the bottom of Long Island Sound, that I know of. It has to be removed. At least that's my experience with it, with some of the people I've talked to.

And one other thing would be just the scarring at the bottom of the Sound, after the installation, the actual installation, whether it's a jetting installation, a plow

another whole series of issues, but we really need to address those -- those issues.

And the stabilization of the rail bed. There are a number of areas along that rail bed where the soil conditions are very firm, from either ledge to swamp, so that's a concern. The stage that plans are at give you maps -- and to be charitable -- are poor for any evaluation for this point in time. For any of the details that Shirley's identified, that normally my office would be involved with, they are based on aerial photographs. It's hard to tell where the corners of buildings are with the shadows involved in the aerial photographs. It makes it difficult to figure out where you are and what impacts there might be.

As we outlined before, while it's not particularly of my jurisdiction, the issue of the drilling area is one that leads me to have several strong emotions. It's been my experience,

after 30 some odd years in the engineering business, that soils never go very far from where they are generated. Everybody's desire is to get rid of them, minimize the transportation cost, and then not worry about it. That tends to leave piles, large piles of areas that might not conform to zoning regulations.

As I understand the process, the materials that will be generated are very much inert, and they will not necessarily be conducive towards any long-term establishment of any usable area once those materials are placed, wherever they are disposed of ultimately. So I think that's something we need to get some further information on.

Again, normal construction plans of the type that we review, we give the level of detail that would talk about depths of pipe, depths below the river bed, conflicts with all the utilities. We're nowheres near that, at

be completed to a depth of about a hundred feet and would allow us to characterize the directional drill path

Based on that, I think the comment that concerns how will this affect the beds, I'd say Islander East is conducting the appropriate studies, and working with the appropriate individuals, to identify that.

At this point, we don't have all that work done, so speculation on specific impacts, at this point, is premature, but we are doing those studies and will be making that information available to the town, to the Siting Council, and to the Federal Energy Regulatory Commission.

CHAIRMAN SHAPIRO: Thank you, Mr. Reinemann

MR MIGNONE: One question regarding anchors. I wanted to go back to the lay barges, buried barges, whatever, but, from what I read, the

anchors are 15 feet wide and you use 8

MR. NELSON: We will not know at that point the results of that sampling and the potential alternatives that may have to be employed as part of this project until that data is actually collected. So I am just trying to get a sense of when do you anticipate having that data collected for the determination for the contingency plan drawn up.

MR. REINEMANN: The schedule we are working with is to begin collecting that data specifically talking about the corings in the coming week, and we should have that data by the end of the year.

MR. LUST: End of the year?

MR. REINEMANN: End of the year, yes.

CHAIRMAN SHAPIRO: Bill, do you want to direct something to Mr. Reinemann?

MR. HORNE: Bill Horne. This is more of a comment. As I read through the submissions to the Siting Council, I was struck by the number of cases where you said we are developing a plan for this, or we will develop a plan for that.

It seems to me that there are a lot of details that you basically don't know how you are going to handle things or how you are going to do things, and I guess I would raise a question as to

MR. NELSON: I mean, granted, that doesn't necessarily translate into the full value of the property, but at least it does start putting some numbers around it.

MR. WILLIAMS: Yeah. You know, I'd say that that's the best example I could give you, really. It may, or may not, you know, be accurate, depending on the situation. I might take some heat from other people, even saying that, but that's the hard facts. That's the market. That's how many animals are going into the market and potentially, an acre of ground can yield that much, or more or less.

CHAIRMAN SHAPIRO: Mr. Williams, so the work was performed in '91, and does the damage still persist or how many years did it take to recover?

MR. WILLIAMS: Based on my last experience with the Iroquois installation, that was in '95. And I believe it was '95, late '95. My personal knowledge was, at that date, it

was -- it was unworkable. There wasn't any resource along the corridor. And as far as working it with shellfish dredges, clam dredges or oyster dredges, it was basically unworkable.

Now, since then, I have heard just the general talk within the industry, that there's -- there's still some pretty severe areas out there that really haven't been flattened out. Eventually it probably will.

However, there was one dragger man, that I do know, that stated recently that he encounters trouble when he gets near the construction corridor with the Iroquois pipe. When he's dragging the net, the doors apparently -- you might find, you know, a swale in the bottom or something. And he has hung up a couple of times. I don't think he's hanging up on the pipe itself.

CHAIRMAN SHAPIRO: So 10 years out you still see issues?

MR. WILLIAMS: Yeah. There's impact there. There's no doubt about it. It's a scarring effect. There may be areas where it's -- it's smoothed out quite well. And then there's probably areas that still have problems, as with anything else really, you know, so --

CHAIRMAN SHAPIRO: Thank you very much. We appreciate your help.

MR. GALLIGAN: Again, thank to Larry Williams for his comments, and the efforts that he took. And we will continue to take the work with the shell fishermen seriously, as the issues are critical, and we're very sensitive to it. And as respects the integrity of the Sound, particularly those that enjoy it and make their livelihood from it, it's critical.

One thing I'd like to do for folks here, before I give Joe Reinemann over, is just updates where we are in terms of our effort to evaluate and confirm our proposed design methods. So

MR. NELSON: Sure.

MR. RADULSKI: Okay. The heavy red line shows the approximate location of the pipeline. And off to the sides, I have distances of 1,000 and 2,000 feet and they suggested that anchoring systems might extend out as far as 2,000 feet from the pipeline location

Now, the only area that will be directly affected by the pipeline itself, that is part of the Branford town land, is this area down in here. At the southern end. This other area, these other areas in here are all owned -- all owned as shellfishing beds, and so we have no jurisdiction over those. And most of these beds are owned by Ed Land (phonetic).

I don't know if he's been here to

talk to Islander East or if he's been invited, but -- okay. Now, down in the southern area in the Branford plans, if we go out to 2,000 feet from the pipeline location, there's a total area

of 174 acres that could be affected by this. If we consider that most of the disturbance will be within a thousand feet of the pipeline, the -- then that is 122 acres.

CHAIRMAN SHAPIRO: Are you submitting that for our record or are you going to take that with you?

MR. RADULSKI: I'm going to take this with me. This is my original. I will have a copy made and submit the copy to you.

Exhibit: Map, Shed

CHAIRMAN SHAPIRO: Okay.

MR. RADULSKI: This has all my discretionalizing and goods on it. So now some of the concerns, I should say the primary concerns that we have are, one, what would be the effect of vibration from the drilling on the overlying beds? Would the vibration

tend to compact the overlying sediment?

I don't know

That's why they hired you, right, Frank.

This document involves pipeline location information and is not available at this Internet site due to homeland security-related considerations. This portion of the Islander East consistency appeal administrative record may be reviewed at NOAA's Office of General Counsel for Ocean Services, 1305 East-West Highway, Silver Spring, Maryland.

October 14 200

My name is Jonathan Waters; am the owner of Thimble Island Shellfish, Inc. shell fishing business with approximately one thousand acres of bottom permitted in and around the Thimble Islands. Sections of this acreage border the Islander East operations.

Sixteen years ago I started this business esurrecting an industry grew up with in this area. Shell fishing has a two hundred plus year history as evidenced by ancient shell middens on the islands and surrounding shoreline. The fact that shellfish occur here naturally make the Thimble Islands area a good bet for aquaculture for several reasons.

The Islands protect the grounds from storms and eroding wave action.

Deep channels funnel nutrients in great volume into the area up over shallow flats that are warmed by the sun. The abundant food concentrated in these shallow nursery areas contributes to good growth

These Islands. with their channels between them, cause eddying currents that enhance the recruitment of juverile clams and the famous Thimble Island oysters.

The area is fed by three. tidal marsh fresh water stream systems, that act as natural nursery areas and habitat for shellfish, fish and wild life.

Off shore reefs provide habitat areas for lobsters and finfish

The Thimble Islands are a unique, dynamic and productive area that has provided consistent resource over the years commercially as well as recreationally

In my capacity as owner/operator of a small shellfish farming operation I have had the opportunity to observe the area year round for the past sixteen years. I have always felt that the winter had a cleansing effect on the environment. I have watched the islands return to their "natural" state unaffected by the influx of humanity that accompanies the summer months. A "natural state" inhabited by arctic bird species, seals, winter herring and ice. I often think this must have been what it was like, but more so...five hundred, a thousand years ago. I confess to being jealous and protective of this.

Some of my concerns and questions about the project are as follows. These are somewhat general and will be expanded on more specifically in writing.

That due to the complexity of the Bethnic structure of the nearby islands sediments could be trapped, by the eddying currents.

- That the sediments from the installation of the pipeline would adversely affect the seed and market oysters planted in proximity to the project. The project is slated for the winter months when the clams and oysters are nearly dormant and not filtering actively. While oysters and clams can handle some ingestion of silt, purging is more difficult in the winter and could be expected to cause mortality and stress when the oysters are in a weakened state.
- That the trenching of the pipeline would expose the shellfish and environment to heavy metals and /or contaminants. That the shellfish would bio-accumulate these substances.
- That the water quality of the area would be affected due to spills and pollution from the offshore construction activity. The area of the proposed pipeline project has a year round "Approved" status for water quality and shellfish harvest. I would not want this status jeopardized.

- That the pipeline be fully buried as a safety issuse so as not to obstruct future fishing activity, and lobster and crab migration.
- Run out and or blow out from HDD and its associated problems. How large an excavation will be needed at the exit hole, for the transition to trench?
- Potential problems with semi dormant finfish i.e. blackfish in the Browns Inner Reef/ Dick Rocks area in the winter months/ traditional blackfish/tautog/fishery.
- Maintenance issues and lifetime of the pipe, underwater would we be leaving a legacy or a liability for our children? Repair, how do you fix a pipe in the area of the HDD? In an emergency there would be impacts – environmental impacts – nonscheduled impacts.
- Would Islander East restore the area of the trench and construction corridor to pre-pipeline or better, i.e. plant clutch etc.
- Some other thoughts

  Would Islander East allow leasing over the pipeline?

  - Would security prohibit vessels in the vicinity of the pipeline?
  - It has been stated that Islander East would let nature heal the area over the pipe. This leads one to believe that that would preclude activity over the area, how long would it take for the path of the pipeline to heal?

Safety issues – what is safe? If it's not safe it can have a devastating environmental impact. Heavily laden barges carrying upwards of two million pounds of crushed stone per barge routinely parallel the PPR often within five hundred feet. No disservice to the brave mariners that handle these behemoths, but they are not on a track and I've seen them get loose, roll

over and sink. In fact one is still on the bottom out there near one of the proposed routes.

Will there be valves in the pipe under the seabed? Twenty-two miles of pipe is quite a reservoir of gas.

In conclusion it is my hope that all of these issues as well as the other issues raised here will be answered as assured. While have little doubt that Islander East operates in good faith the fact remains that environmental impact to the near shore, islands and shallow areas is not lessened by assurances" This project will scar the area physically and the memory of it will haunt us as the pipeline enters the realm of history Thank you

Jonathan Lee

I will be submitting these comments, as well as additional written detailed comments to this Committee.